REMARKS

In the instant application, claims 1-7 are pending. The claims have been amended to address issues raised in the Office Action. Reconsideration of the pending claims in view of the foregoing amendments and following remarks is respectfully requested.

Claim Rejections Under 35 U.S.C. § 101 and 35 U.S.C. § 112

Claim 5 stands rejected under 35 U.S.C. § 101 as not included process steps. Claim 5 has been amended to address this issue. Withdrawal of the rejection is respectfully requested.

Claims 1-7 have been rejected under 35 U.S.C. § 112, second paragraph. The claims have been amended to address the issues raised in the Office Action. With regard to the rejection related to point 3, labeled "fifthly," the Applicants provide that according to the definition of B) in claim 1, an isomer mixture of toluene diisocyanate is employed with <35% by weight of 2,6-toluene diisocyanate. It is believed that a person skilled in the art understands that this percentage is based on the whole isomer mixture (which consists of 2,6-toluene diisocyanate and 3,4-toluene diisocyanate) which means that the rest of the mixture is >65% by weight 2,4-toluene diisocyanate. Morever, it is believed that the definition in claim 1 of "by trimerizing" A), B), C), and D) until the content of free non-trimerized residual TDI monomers is ≤0.2% by weight is also clear to one of skill in the art. A skilled artisan would understand that the percentage of residual TDI monomers is based on the prepared solution. As such, Applicants believe the language to be clear. Withdrawal of these rejections is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102/103

Claims 1 and 3-7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,518,729 to Breidenbach et al. (hereinafter "'729").

The '729 patent is directed to solutions of isocyanato-isocyanurates and process for their preparation. According to the process of the '729 patent, a mixture of different isocyanates is being trimerized. As can be seen in the '729 patent in column 2, lines 43 to 50, mixtures of (i) 2,4-diisocyanato-toluene and optionally 2,6-diisocyanato-toluene (TDI) and (ii) 4,4´-diisocyanato-diphenylmethane and optionally 2,4´-and/or 2,2´-diisocyanato-diphenyl methane (MDI) are trimerized in a molar ratio of (i) : (ii) of from 5 : 1 to 1 : 3. *See also the '729 patent at column 3, lines 6-8; column 3, lines 38-41.* According to Examples 1 to 14 of the '729 patent mixtures containing different amounts of the 2,4- and/or the 2,6-TDI isomers and different amounts of the 4,4-MDI isomer and/or the 2,4´-MDI and/or the 2,2´-MDI isomers were trimerized. As solvents dibutyl phthalate (DBP) and di-(2-ethylhexyl)-phthalate (DOP) were used. The comparative Example 17 of the '729 patent is the only example in which only TDI is trimerized in DOP. According to this Example TDI 65 is employed which is a mixture of 65% of 2,4-TDI and 35% of 2,6-TDI. *See '729 at column 6, lines 58-59.*

In contrast, instant claim 1 is directed to a process for the preparation of polyisocyanate solutions in which according to step B) isomer mixtures of toluene diisocyante (TDI) isomers which contain < 35% by weight of the 2,6-TDI isomer (while the rest is > 65% by weight of the 2,4-TDI monomer) are trimerized in a solvent A) which comprises at least one dialkyl phthalate having branched alkyl radicals. The presently claimed process is different from the process of the '729 patent given that in present claim 1, only TDI isomers are employed while in the '729 patent mixtures of TDI isomers and MDI isomers are employed. As such, the '729 patent is trimerizing different starting materials and, thus, does not disclose the process according to claim 1. Withdrawal of the anticipation rejection is respectfully requested.

Further, the Applicants have found that the solutions according to instant claim 1 are characterized in excellent storage stability and have no tendency towards crystallization or formation of precipitates or phase separation. These solutions also possess an extremely low content of free TDI, even after storage, which is a particular advantage, because this toxicologically hazardous substance has a low boiling point. Example 17 of the '729 patent demonstrates that trimerization of a TDI isomer mixture

with **35% by weight of the 2,6-TDI** isomer results in solutions which have a residual TDI content of more than 0.4% by weight and a solid content of < 25 % by weight while the viscosity is about 9000 mPas/25°C. A further trimerization of the solution led to a drastic rise in viscosity and gave products outside the inventively significant specification. This result is unexpected and could not be foreseen from the disclosure of the US '729 patent. As such, is it believed that instant claim 1 is not obvious in view of the '729 patent. Withdrawal of the obviousness rejection is respectfully requested.

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over DE 10229780 A1 (U.S. Patent No. 6,936,678) (hereinafter "'678") or U.S. Patent Application Publication Number US 2004/0006228 to Brahm et al. (hereinafter "Brahm").

The '678 patent is directed to a process for the preparation of solvent- and/or diluent-containing polyisocyanates based on 2,4- and/or 2,6-diisocyanatotoluene which are substantially free of monomer TDI. According to the '678 process, the trimerization is carried out in a mixture of A) from 20 to 80 % by weight of diisocyanate component containing at least 80% by weight of 2,4- and/or 2,6-diisocyanatotoluene and B) from 20 to 80% by weight of solvents and/or diluents and C) phenolic catalysts. *See the '678 patent, column 2, lines 40-46.* In column 3, lines 44-45 of the '678 patent it is mentioned that as solvents B) all solvents and diluents customary in polyurethane chemistry can be used. As can be seen from the working examples of the '678 patent, only butyl acetate is used as a solvent. The '678 patent does not suggest the use of dialkyl phthalates which are used as solvent according to the present invention.

Further, the '678 patent is directed to a "simple" process for preparing substantially monomer-free TDI trimer solutions. *See column 2, lines 31 – 32.* In fact, the use of butyl acetate as a solvent for the trimerization reaction provides an easy access to products which have low viscosity, high solid content and low content of free TDI monomer. Butyl acetate is an effective solvent and it possesses a very low viscosity. On the other hand, butyl acetate is highly volatile, strong smelling and highly combustible which may be disadvantageous if the process is used in an industrial scale. The dialkyl phthalates having branched alkyl moieties, which are used as a solvent

according to the present claim 1, have a low volatility and they are not easily inflammable. On the other hand, they have a high viscosity which makes them less effective as solvents. Surprisingly, the use of the highly viscous dialkyl phthalates as solvents, in combination with the specific catalyst and maximum amount of 2,6-TDI as featured in instant claim 1, results in insocyanurate polyisocyanate solutions which have a viscosity of less than 20 000 mPas at 23° C, combined with a high solid content and a very low content of free non-trimerized residual TDI monomers. The Applicants believe that this result could not be foreseen from the disclosure of the '678 patent alone or in combination with the '729 patent.

With regard to Brahm, Brahm is directed to a simple process for the preparation of solvent-containing polyisocyanates based on 2,4- and/or 2,6-diisocyanatotoluene by trimerization of A) from 20 to 80 % by weight of a diisocyanate component containing at least 80% by weight of 2,4- and/or 2,6-diisocyanatotoluene and B) from 20 to 80% by weight of solvents and C) 0-20 % by weight of an alcohol component and D) phenolic catalysts. The process is characterized in that by ongoing trimerization additionally 0.1-25% by weight of monomeric 2,4-diisocyanatotoluene is metered in one or more steps. *See paragraph [0016].* Further, in all working examples, butyl acetate is used as the solvent. The Applicants believe, that the for the same reasons as outlined with respect to the '678 patent and/or Brahm, instant claim 1 is not rendered obvious in view of the disclosure in these references alone or in combination with the '729 patent. Withdrawal of the rejection is respectfully requested.

Claims 2-7 either directly or indirectly depend from claim 1 and are patentable over the cited art for at least the same reasons as set forth above with regard to claim 1. Withdrawal of the rejection of these claims is respectfully requested.

In view of the foregoing, the instant application, as amended, is now in condition for allowance. A prompt response to this Amendment in the form of a Notice of Allowability is hereby solicited.

The USPTO is hereby authorized to charge any fees, including any fees for an extension of time or those under 37 CFR 1.16 or 1.17, which may be required by this paper, and/or to credit any overpayments to Deposit Account No. 50-2527.

Respectfully submitted,

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